

Claims 1-3 and 26 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,470,450 to *Bizzell et al.* *Bizzell et al.* was apparently cited for its disclosure of an evaporator having a port 33 at which liquid is supplied, a port 36 at which liquid exits, and a port 34 at which vapor exits.

Claim 1 has been canceled and independent claim 2 has been amended to incorporate subject matter similar to that recited in original claim 3, which has been canceled. As amended, claim 2 defines a thermal transport system including an evaporator for receiving heat generated at a heat generation unit. The evaporator comprises a liquid reservoir for accommodating liquid-phase working fluid, a liquid supply port for supplying liquid-phase working fluid to the liquid reservoir, a vapor ejection port for ejecting from the evaporator, working fluid vaporized at the evaporator, a liquid ejection port for ejecting from the evaporator, liquid-phase working fluid accommodated in the liquid reservoir, and a reservoir tank connected to the evaporator at the liquid ejection port and adapted to receive excess liquid-phase working fluid from the evaporator when a liquid-phase working fluid level is above a desired level and to supply liquid-phase working fluid to the evaporator when a liquid-phase working fluid level is below a desired level.

Bizzell et al. does not disclose a thermal transport system including the claimed combination of features including a reservoir tank as recited in claim 2.

In view of the differences between claim 2 and *Bizzell et al.*, it is respectfully submitted that claim 2 is not anticipated by *Bizzell et al.*

Claim 26, as amended, defines a thermal transport method using an evaporator for receiving heat generated at a heat generation unit. The method includes the steps of

supplying liquid-phase working fluid to the evaporator, accommodating in the evaporator, liquid-phase working fluid supplied to the evaporator by the supplying step, ejecting from the evaporator, working fluid vaporized at the evaporator, ejecting from the evaporator, liquid-phase working fluid supplied to the evaporator by the supplying step and accommodated in the evaporator by the accommodating step, and adjusting an amount of liquid-phase working fluid in the evaporator by supplying liquid phase working fluid to the evaporator from a reservoir connected to the evaporator at a liquid ejection port of the evaporator when a level of the liquid-phase working fluid is below a desired level and ejecting liquid-phase working fluid from the evaporator through the liquid ejection port and into the reservoir when the level of the liquid-phase working fluid is above the desired level.

Bizzell et al. does not disclose a method including the claimed combination of steps including the adjusting step as recited in claim 26.

In view of the differences between claim 26 and *Bizzell et al.*, it is respectfully submitted that claim 26 is not anticipated by *Bizzell et al.*

Claims 6-8 and 15-17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,677,336 to *Moore, Jr.* *Moore, Jr.*, is cited as disclosing a system including a heat sink or condensing section 236 (FIG. 18) that is connected to an outlet of a vaporizer 230 from which it receives vapor V, and that is connected to an inlet of another vaporizer 222 to which it supplies liquid L.

Claim 6 defines a heat absorber including a plurality of evaporators serially connected in different positions for receiving heat generated at heat generation units. Each evaporator includes a liquid reservoir for accommodating liquid-phase working fluid, a

liquid supply port for supplying liquid-phase working fluid to the liquid reservoir, a vapor ejection port for ejecting from the evaporator, working fluid vaporized at the evaporator, a liquid ejection port for ejecting from the evaporator, liquid-phase working fluid accommodated in the liquid reservoir, and a reservoir tank connected to the evaporator at the liquid ejection port and adapted to receive excess liquid-phase working fluid from the evaporator when a liquid-phase working fluid level is above a desired level and to supply liquid-phase working fluid to the evaporator when a liquid-phase working fluid level is below a desired level.

Moore et al. does not disclose a combination of features including a reservoir tank connected to the evaporator at the liquid ejection port and adapted to receive excess liquid-phase working fluid from the evaporator when a liquid-phase working fluid level is above a desired level and to supply liquid-phase working fluid to the evaporator when a liquid-phase working fluid level is below a desired level as recited in claim 6.

In view of the differences between claim 6 and *Moore, Jr.*, it is respectfully submitted that claim 6 and the claims dependent therefrom are not anticipated by *Moore, Jr.*

Claim 15 defines a thermal transport system including a plurality of evaporators serially connected in different positions for receiving heat generated at heat generation units and a condenser for rejecting heat. Each evaporator includes a liquid reservoir for accommodating liquid-phase working fluid, a liquid supply port for supplying liquid-phase working fluid to the liquid reservoir, a vapor ejection port for ejecting from the evaporator, working fluid vaporized at the evaporator, a liquid ejection port for ejecting from the evaporator, liquid-phase working fluid accommodated in the liquid reservoir, and a

reservoir tank connected to the evaporator at the liquid ejection port and adapted to receive excess liquid-phase working fluid from the evaporator when a liquid-phase working fluid level is above a desired level and to supply liquid-phase working fluid to the evaporator when a liquid-phase working fluid level is below the desired level.

Moore et al. does not disclose a combination of features including a reservoir tank connected to the evaporator at the liquid ejection port and adapted to receive excess liquid-phase working fluid from the evaporator when a liquid-phase working fluid level is above a desired level and to supply liquid-phase working fluid to the evaporator when a liquid-phase working fluid level is below a desired level as recited in claim 15.

In view of the differences between claim 15 and *Moore, Jr.*, it is respectfully submitted that claim 15 and the claims dependent therefrom are not anticipated by *Moore, Jr.*

New claims 27-31 are added. It is respectfully submitted that new claims 27-31 define patentably over the cited references. For example, claims 27 and 29 each recite a combination of features including, *inter alia*, a liquid supply port for supplying substantially only liquid-phase working fluid to the evaporator, and a liquid ejection port for ejecting substantially only liquid-phase working fluid from the evaporator. The evaporators in *Moore, Jr.*, has ports for supplying and ejecting both vapor and liquid, together. Also, claims 27 and 29 both recite a combination of features wherein, *inter alia*, the liquid ejection port of all but a last one of the plurality of evaporators is directly connected to the liquid supply port of a next one of the plurality of evaporators by a liquid line for transporting substantially only the liquid-phase working fluid so that the plurality of

evaporators are connected to one another in series by the liquid line. In *Moore, Jr.*, the evaporators are connected via an ejector pump.


New claim 31 recites a method involving a plurality of evaporators. *Bizzell et al.* only involves a single evaporator. Further, the claimed method includes a combination of steps including, *inter alia*, supplying substantially only liquid-phase working fluid to each evaporator of the plurality of evaporators, and ejecting from a liquid ejection port of each evaporator of the plurality of evaporators substantially only liquid-phase working fluid. This combination of steps is not disclosed or suggested by *Bizzell et al.*

It is respectfully submitted that all of the pending claims are in condition for allowance. Allowance is cordially urged.

If the Examiner should be of the opinion that a telephone conference would be helpful in resolving any outstanding issues, the Examiner is urged to contact the undersigned.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Harold R. Brown III
Registration No. 36,341

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

Date: Jan 9, 2001